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Supreme Court of the United States.

CONCRETE STEEL COMPANY, Petitioner, vs. GEORGE E. VANDENBURGH, Respondent.	October Term 1922, No. 237. Oct. Term 1921, No. 674.

BRIEF IN BEHALF OF RESPONDENT.

Statement of the Case.

The matter at bar is a patent case which comes here on a petition for a writ of certiorari, the case below being in the Second Circuit wherein George E. Vandenburgh, the patentee, was the plaintiff and the Concrete Steel Company, the defendant. For the purposes of this case these parties will be designated here as below.

The patent in suit is not an original patent, but is a reissue patent No. 14,182 dated August

15, 1916, and applied for July 1, 1916. The original patent of this reissue was applied for May 9, 1906, was granted January 22, 1907, No. 841,741. The reissue patent is identical as to drawings and specification with this original patent. Claim 3 of the reissue, which is here in suit, is identical with claim 3 of the original patent, except that the word "edge" is substituted for "end". This is a mere clerical correction. Claim 5 of the reissue patent which is here in suit, is identical with claim 5 of the original patent. Claims 1 and 2 of the reissue patent are reductions in scope from claim 1 of the original patent, that claim being broader in scope than the art warranted. This reissue patent has been passed on by three Circuit Courts of Appeals and all of them have held that Claims 1 and 2 are invalid because of a supposed improper expansion of the reissue. Claim 3 has been held valid in all three Circuits, although there is some doubt as to the decision of the Sixth Circuit, as will appear below. Claim 3 has certainly been held valid in the Second and Third Circuits. Claim 5 has been involved in the case at bar and in no other case and its validity has not been questioned by any Appellate Court.

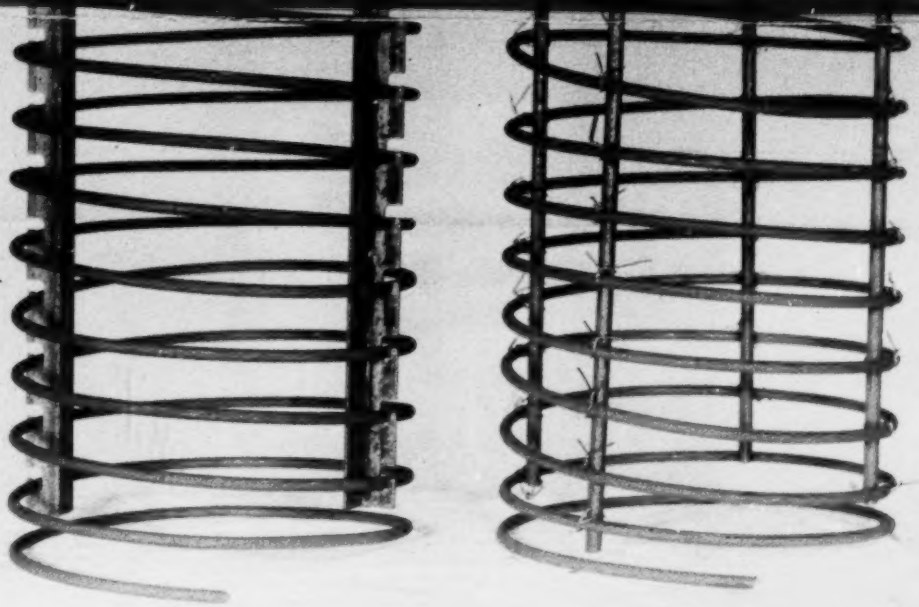
As above stated, the reissue patent in suit has been very much litigated and has been passed upon by three Circuit Courts of Appeals. In the case at bar the patent was held invalid, as to the claims here involved, by Judge Hough, sitting in the Southern District of New York. An appeal was taken by the plaintiff which

affirmed the lower court as to claims 1 and 2 and reversed it as to claims 3 and 5. The opinion of Judge Hough is found in the record at page 134 and the opinion of the Circuit Court of Appeals, is found at 258 F. R. 143, and in the record at page 150. These and other opinions on this patent are quoted in petitioner's brief. An accounting was had after the decision of the Circuit Court of Appeals which has resulted in a recovery by the plaintiff of profits in the sum of $15,918.33. No damages were allowed, the Master, the District Court and the Circuit Court of Appeals, all being in full agreement. This decision is found at 278 F. R. 607 and at page 397 of the record. The Master's report is found at page 314.

In the Third Circuit a suit was brought by this plaintiff against the Electric Welding Co., the first opinion being rendered by Judge Orr, sitting in the Western District of Pennsylvania, who held the patent invalid as to claim 1, and probably as to claim 3, but if this claim is valid, it is not infringed, and in any event he held that the bill should be dismissed. On appeal, the Circuit Court of Appeals for the Third Circuit held that the patent was valid, but not infringed, as to claim 3 and invalid as to claims 1 and 2. A petition for a writ of certiorari was filed in this Court in this case and denied (253 U. S. 497). In the Third Circuit the decision of the lower Court was affirmed. The opinions of the District and the Circuit Courts of Appeals are found at 259 F. R. 579 and 263 F. R. 55.

In the Sixth Circuit suit was brought by this plaintiff against the Truscon Steel Co. and there the lower Court passed on claims 1 and 3, which were the only claims in suit. The Learned Court held both claims to be invalid or if valid, not infringed. On appeal the lower Court was affirmed and the Court said as to claim 3: "It is true that this particular method of attaching the loop to the upright was new as applied to the art of metal reinforced concrete. We recognize that the use of diagonal kerf and overhanging spur method of connection in a non-analogous art did not anticipate the combination claim in question." It held claim 1 invalid and whether it held claim 3 invalid or valid makes no difference. For the purpose of this brief, we will hold that this Court held the claim valid, but not infringed, but lay no stress on the matter as it is immaterial either way. (These opinions appear in the companion case, No. 273.)

The defendant's structure in the case at bar is identical with the structure of the patent in suit and with claims 3 and 5, so that no question of infringement can be seriously urged here. If the patent is valid, it is infringed.



PATENTED STRUCTURE

Coils locked to bars by hammer blows.
Spacing maintained when concrete is poured and caused

Coils held to bars by wires
Tied spacing maintained when concrete is poured and tamped

The Invention.

The nature of the invention of the patent in suit can be readily determined, insofar as here relevant, from Figure 4 of this patent. As commercially used, it is shown in a structure which is illustrated in the accompanying photographs. Note that there are four elements, to wit, a coil, a bar, a kerf and an overhanging spur which is bent down by a hammer blow so as to imprison the coil in the kerf. This photograph also shows the only prior art structure which had any considerable use to speak of. A description of this kind of structure is found in the record beginning with page 200. The paper art we will consider below which is the art relied upon by the defendants. The prior art which the plaintiff relied upon for the purposes of the accounting is shown at the right of the photograph. In this prior art structure appears a coil and a bar, but the coil is secured to the bar by means of a wired loop, of hair pin shape, which is passed about the bar of the coil and then twisted in a simple and obvious manner. The patented structure differs from the prior are structure in the use of an overlapping spur and a kerf. The overlapping spur and kerf keep the coil so that it is evenly spaced and rigidly held when the reinforcing is surrounded by concrete and it is rigidly held even though the concrete be tamped or otherwise worked into position. With the wired structure, the spacing is necessarily uneven be-

cause the coils will not lie true and slide on the bars and one irregularity necessitates another so that it is impossible to get regular spacing. There is an obvious difference in the time necessary to erect these two structures. The patented structure is erected in a very few minutes by means of hammer blows given at the proper time and place and while the coil is held in position. The wired structure requires a great many manipulations incidental to the placing and twisting of the wire and so takes many more minutes, say three or four times as long to erect.

The Court may ask for citations as to when this wired structure first went into use and to what extent it has been used. The record does not say when this wired structure first went into use. The engineering text books give citations which show this use to have been at least as early as 1893. (See page 21 of this brief where the matter is discussed at length). For additional citations in the record where this is referred to, we call attention to the testimony of Robert A. Cummings, page 28 Q28 of the transcript and also the testimony of Julius Kahn page 29 Q4. This answer taken in connection with his answer to question 1 indicates that he designed thousands of buildings, many of which must have used this wired structure.

A great many pages of the defendant's brief is devoted to what seemed to us to be entirely immaterial matter. The patent in suit shows two structures and also has claims which relate to two different structures. It has one set of claims which are broad enough to cover

both sets of structures and one set of claims limited to one structure. These sets of structures can be designated as the horizontal and vertical. The horizontal structure relates to lintles, sills and other structures which lie horizontally when in place. The other embodiment of the invention is for columns which stand vertically. With the specific claims and the horizontal construction, this Court has nothing to do. All the matter relating specifically to horizontal structures may be ignored and considered out of the case. The defendant does not use such a structure and none of the claims which are restricted to this horizontal structure are involved in this suit. Therefore, we will not consider the irrelevant matter of the defendant's brief, but confine ourselves to the reinforce for columns in which we are interested. The only reinforce that requires our particular attention is one involving the structure of Figure 4 in one embodiment and in Figure 6 in another embodiment, although for the purposes of this case, we may ignore Figure 6, as it is rather complicated and has two coils where one will suffice, and confine our attention to the structure of Figure 4. Here are clearly disclosed the four elements we have cited above, namely, the *bar*, the *coil*, the *kerf* and the *overhanging spur*. In claim 5, the kerfs are defined as "disposed diagonally to the length of the bar", and the overhanging spurs are defined "as projected toward the center of the bar". The term "center of the bar" means midway between the ends. In Figure 1 these spurs extend in opposite directions and if pro-

jected will run into a line perpendicular to the bar and passing through its geometrical center. In Figure 4 the spurs all stand one way so that a line drawn through the axis of these spurs, if projected far enough, will intersect this same line drawn perpendicular to the center of the bar. If the Court takes another view of the case and says that the center of the bar is the longitudinal axis of the bar, a line drawn through the axis of these spurs will also intersect this center line and in both cases it will intersect it diagonally.

We explain this point a little because the defendant, in its brief, takes the position that claim 5 must be limited to a structure wherein the kerf and spurs project in two opposite directions, as shown in Figure 1 and under this contruction claim 5 should be limited to what is set forth in Figure 1 and as the defendant does not use this structure, but uses the structure of Figure 4 the claim is met that there is no infringement. By comparing claims 4 and 5 we find that the defendant seeks to give an artificial construction to claim 5 which will make it identical in scope with claim 4. This is absurd. Claim 4 covers the horizontal bar of Figure 1 with the oppositely disposed coils and claim 5 is limited so as to cover a coil extending in one direction only and applies either to Figure 4 or Figure 6.

The patent in suit on its face is not limited to the horizontal structure only. Beginning with line 16 of page 1, transcript of record page 49, it appears that the patent sets forth what we have designated as the horizontal bar

as one object of the invention and then goes on to say beginning with line 25 that there are other objects as thereinafter set forth, and in Figure 6 reference is made to a column construction which is amplified in the paragraph beginning with line 89 and on the following page, 50 of the transcript of record, it is stated that the invention is for use in connection with columns or elsewhere where it is suitable.

The defendant urges that a coil secured to a bar as directed in the patent cannot be collapsed. The plaintiff alleges that it is impossible to make a coil, as shown in Figure 4, that cannot be collapsed. Nothing has ever been presented by any party in Court which cannot be readily collapsed. Collapsibility is a mere incident which is not mentioned in the patent in suit. As pointed out below, when the reinforce is in place and embedded in the concrete where it is used, it is rigid and cannot be collapsed under any circumstances. The possibility of collapsing is one which may be of use in transportation under certain circumstances, but in any event this is a minor feature which is of no great consequence one way or the other.

The defendant's brief devotes a great deal of attention to irrelevant matter which we do not think it necessary to answer specifically. We prefer to argue the case on its merits in a clear, simple, concise way and debate what we believe to be the real issues in the case.

Then is another aspect of this invention on which we comment briefly.

This invention is the product of the hand and brain of a bricklayer. It is not the prod-

uct of a well equipped factory. The embodiment shown is crude, but it contains the correct idea. It has the (1) coil, (2) bar, (3) kerf and (4) overhanging spur. These never appeared together in the art before. Here they are crudely but sufficiently shown and claimed.

Throughout the defendant's brief, we find a determined effort to create a prejudice against this patent because of this crudeness. A comparison is had with the defendant's structure, the product of an expensive and well equipped factory which product embodies the same elements, in the same combination which obtain the same result and function the same. It is implied that there is no infringement because of this refinement of detail.

This is a new doctrine of law. If sound it might have been used to defeat the great epoch making inventions of the world. The first telephone was crude but it embodied the right idea and the same is true of the first telegraph, the first phonograph, the first steam boat, the first locomotive, the first wireless apparatus, the first sewing machine, the first flying machine, and so on through a long list, they one and all were crude when first made, but who thought the less of them on that account? What basic patent was ever defeated for this reason?

Undoubtedly, the principal issue in this case is the issue of validity of claims 3 and 5, and if the Court decides that in favor of the defendant, it will be successful and there is nothing to plaintiff's case. If, on the other hand, this issue be decided in favor of the plaintiff,

there will be minor issues to decide, such as the validity of claims 1 and 2 of the reissue, the question of damages and the question of profits. This brief will be addressed to the four issues, beginning with the validity of reissue claims 1 and 2 and following with the validity of the patent and particularly claims 3 and 5 and following with a discussion of damages and profits.

POINT I.

The patent in suit is a proper reissue.

There can be no question as to the validity of claims 3 and 5 as far as the reissue is concerned. No Court has disputed that. They may be invalid as to the prior art, but they are not in any way affected by the question of reissue. Verbal correction was necessary in claim 3 and such verbal correction can be made. (*Gage* v. *Herring*, 107 U. S. 640). This brings us to a consideration of claims 1 and 2.

It is contended on behalf of the plaintiff, that claims 1 and 2 of the reissue are nothing more or less than claim 1 of the original patent put in proper form and narrowed and restricted so as to properly define the plaintiff's invention. If this be true, the delay of nearly ten years in applying for a reissue is immaterial and time in no way enters into the matter. *Abercrombie* vs. *Baldwin*, 245 U. S. 198. For the convenience of the Court, claim 1 of the original patent and claim 1 of the reissue are set down in parallel columns, spaced so as to show cor-

responding elements, with remarks interpolated between.

Original Claim 1	Reissue Claim 1
In	A concrete reinforcing consisting of

(The difference between the introductory clauses is immaterial.)

a reinforcing bar	a bar having a plurality of integral spurs

(The reissue claim is more more limited as to the bar.)

a spiral coil rigidly secured secured thereto at two points in each convolution thereof	and a spiral coil permanently secured thereto by having the spurs bent down on the several coils

(Disregarding the words "rigidly" and "permanently", which will be considered below, the coil and its securing means are much more limited in the reissue than in the orignal claim.)

and extended beyond and free of said bar at the opposite side therefrom to the securing point	the coils extending beyond and free of said bar at the opposite side therefrom to the securing point

(These last clauses are substantially identical).

The only matter to be considered in this connection is the second element and its holding means, that is, the spiral coil and its connections, which the original claim, are defined as "rigidly secured thereto at two points in one convolution", and in the reissue claim they are defined as "permanently secured thereto by having the spurs bent down".

The language of the reissue claim is taken from lines 85 to 88 inclusive of page 1 of the patent in suit.

What is the meaning of these terms "rigidly secured" and "permanently secured" as here used? Let us consult a recognized authority. The word "rigidly" is defined in the Century Dictionary as follows:

> "In a rigid manner. Stiffly, inpliantly, inflexibly."

It is not defined in any book as *immovable* and in mechanics there is no such thing.

Turning to the definition of "permanently" we found the following in the Century Dictionary:

> "In a permanent or lasting manner; so as to remain; as, to serve permanently; to settle permanently."

And the word "permanent" is defined as follows:

> "Lasting or intended to last indefinitely, fixed or enduring in character, condition, state, position, occupation, use or the like;

> remaining or intended to remain unchanged or unremoved; not temporary or subject to change; abiding; as, a *permanent* building; *permanent* colors, *permanent* employment, *permanent* possession."

Is there any great difference between these two words "permanently" and "rigid" as employed here? A rigid structure is one which does not change its state under the conditions of use. A permanent structure is one that does not change its state under the conditions of use. The spiral reinforcing as set forth in the claims does not change its state under the conditions of use. That is one reason for its great value. It is precisely this feature, which in addition to the ease with which it can be assembled, distinguishes it from the wired structure which is shifted and changed during the process of pouring and tamping the column in which the reinforcing is placed and is assembled with expense and difficulties.

It is true that another advantage is that the spiral reinforcing of the claims can be shipped with greater facility than the wired structure because it can collapse, as a parallel ruler is collapsed, and it is altogether probable that this property was not known or appreciated by the inventor of the patent in suit at the time he made his invention, but this is a mere incident of the construction. Assuming this to be the case, what of it? This matter has often come before this Court and always received one treatment and one answer. It is well set forth in the *Grant Tire*

case 220 U. S. 428, 31 Sup. Court Rep. 447 where the properties of the Grant tire were not in the least appreciated by the inventor at the time he took out his patent. There the Court found as follows:

> "A patentee may be baldly empirical, seeing nothing beyond his experiments and the result; yet if he has added a new and valuable article to the world's utilities, he is entitled to the rank and protection of an inventor. And how can it take from his merit that he may not know all of the forces which he has brought into operation? It is certainly not necessary that he understand or be able to state the scientific principles underlying his invention, and it is immaterial whether he can stand a successful examination as to the speculative ideas involved." *Diamond Rubber Co.* v. *Consolidated Rubber Tire Co.,* 220 U. S. 428, 31 Sup. Court 444, 447.

Furthermore, this advantage in shipment is of small consequence because the Labor Unions generally require job erection and not shop erection, for example, as around the City of New York. This matter was commented upon and considered by the Court below and appears in the testimony of Barbour, defendant's witness who was produced at the request of the plaintiff in answer to questions 41 to 44 inclusive. (Record page 173.)

Now summarizing this matter, we find that the first element, "the bar" is much broader in the original claim than in the reissue claim and

that the spiral in the original claim is set forth as an impossible structure which is rigidly secured to the bar at *two points* in each convolution while the reissue claim covers the coil as secured by the spurs being bent down on the several convolutions of the spiral and thereby corrects the impossibility of the first claim. This impossibility is a clerical error which was corrected in the reissue. No one has deemed this point worth talking about. The difference between "permanently" and "rigidly" is not worth further consideration. Obviously, the claim 1 of the reissue is much more specific than claim 1 of the original patent.

It is not necessary to consider claim 2 because it is substantially identical with claim 1 differing in using *"integral means"* where claim 1 uses "integral spurs". As "means" and "spurs" are one and the same thing, both in the patent and in the defendant's structure, discussion is superflous.

We appreciate that the three decisions of the three Circuit Courts of Appeals and of the lower Courts are all against the plaintiff. They all go off on a tangent which is well set forth in the decision of the Circuit Courts of Appeals in the Second Circuit which reads as follows:

> "Both Courts held that the original patent did not contemplate collapsibility of the structure because the spiral coil was described as rigidly fixed by kerfs and spurs on the reinforcing bar. For this reason, it was held that claims 1 and 2 of the reissue

which were intended to cover collapsibility of the structure were invalid as too broad. We agree in this conclusion."

We have already pointed out above that *as used* the coil and bar of the patented structure and of the defendant's structure are just as *rigidly fixed together as possible. Rigidity is the essence of this invention, once the structure goes into use.* That is why the city codes call for this invention. (Rec. p. 200, fol. 132.) What it is before it is used is immaterial. It may be in separate parts, the coils and the bars being shipped to the job separately, or it may be erected in the shop and sent to the job, in either an erect or collapsed condition. Whatever happens in this regard in no way changes the nature of the invention of the patent in suit.

In spite of what all the Courts have said against us, we contend that these lower Courts are all in error because they disregarded plain and obvious facts, and the reissue is right and proper and has simply corrected an obvious clerical error in the claim, and made the first two claims much more restricted, to-wit, restricted as to spurs, as to the way the spurs hold the spiral, and as to the material from which the spurs shall be made, three definite restrictions not found in the original claims.

We have already pointed out that this matter of reissue is a minor point because the plaintiff must win if he establishes claim 3 and is successful as to that, and claim 3 is the same in substance that it was in the original patent and all

Courts have so held and held that this claim has the force and effect it would have had, as far as infringement is concerned, had no reissue patent been taken out. This is amply supported by the authorities and particularly *Gage* v. *Herring,* 106 U. S. 640.

The defendant devotes many pages to this matter of reissue, namely pages 49 to 76 of its brief. Throughout this portion of its brief, the defendant assumes that claims 1 and 2 have been broadened in the reissue. This is not the case. The reissue claims are more specific than the original claims and they are limited to the details of construction which the patent shows. Take claim 1, for example. As originally drawn, it was broader in that the spiral coil was defined "as rigidly secured" to the bar. Now it is defined "as permanently secured by integral spurs". Obviously, this is a narrowing and not a broadening and the authorities cited by the defendant have no bearing and its argument is immaterial and irrelevant.

POINT II.

The patent in suit is valid as to the four claims here involved, namely claims 1, 2, 3 and 5.

In this connection we note that this Court may hold that claims 1 and 2 are invalid because of the reissue matter. Should the Court so hold, claims 3 and 5 are still good as far as the reissue is concerned and they completely

cover the situation here at bar and amply support the judgment of record and any other judgment that the plaintiff may obtain. However, as the plaintiff believes he is entitled to all the claims in issue and as the reissue matter has been argued elsewhere, he will stand on the proposition that all these claims are valid, although he now particularly directs his attention to claims 3 and 5.

The question of invention in this case as in all cases, where the issue is involved, "depends on the state of the prior art and the skill of the calling." If the state of the art and the skill of the calling were adequate to produce the alleged invention of the patent in suit, there was no patentable structure and the patent is invalid. If, on the other hand, the history of the art clearly shows that although the invention of the patent in suit was badly needed, and the skill of the calling was insufficient to produce it until the disclosure of this patent gave it to the world, then, under these circumstances, the presumption of invention is strong, if not conclusive.

That the structure of the patent in suit is valuable goes without saying, and its utility cannot be disputed by a defendant who has foresaken the prior art and clung to the patented structure with a profit of at least $16,000 to itself. Looking a little further into the matter, the necessity of the invention becomes apparent. It must be used because it is cheap and because it is efficient and, because the building codes of the country now require that character of strucutre. With nothing that was used

in the prior art can one be sure that the coil is properly placed with even spacing in the column where it is used. This is most important. A column is reinforced for the same purpose that a barrel is hooped. If a barrel fails under pressure it is because the hoops burst. If a column of this kind fails under pressure it is because the reinforcing bursts and ceases to function. If the coils are not evenly spaced, the column is weakest and most liable to fracture where the spacing is greatest and as the reinforcing is placed where it is invisible and cannot be inspected, such a weakness is not apparent until the failure comes. In fact engineers consider a structure as in a "failed" condition if a hoop is misplaced even if the column does not fall down. From this it appears that the patented structure is always desirable and always has been desirable wherever spiral reinforcing has been employed, but while it was desirable it did not come.

The record does not show just when spiral reinforcing was first used but this is not important as it is quite proper and competent for this Court to turn to recognized text books to see what they have to say on the subject. We call the attention of this Court to one of such books, namely, "Reinforced Concrete" by Buell & Hill, published by the McGraw—Hill Book Company in 1906 and copyrighted in that year and in the year 1904. From this book we could cite many examples of spiral reinforcing which is used in pipes, tanks, chimneys and the like, all of which have been in use for years prior to the date of publication and

have been used the world over. One quotation of such a use is quoted from page 295 where a spiral and reinforcing is shown in Figure 152, which is not reproduced here because the description is sufficient without it.

> "Water-works, Conduit, Bone, Algeria.—An example of the use of reinforced-concrete conduit molded in sections and subsequently laid is furnished by the aqueduct built in 1893 to supply the City of Bone, Algeria, with water. This aqueduct is about 22 miles long and about 2 ft. in diameter, and is of the so-called siderocement construction invention by the French engineer Bordenave. Fig. 152 shows the form of reinforcement employed by this engineer. It consists of T bars wound in helical form around longitudinal parallel bars of the same section, the two sets of bars being connected at intersections by wire ties. This reinforcement is embedded in a Portland-cement and sand mortar."

Now it may be urged that it is not proper for the Court to look into text-books to satisfy itself as to the history of an art. This matter has been expressly passed upon by this Court and the contrary view has been held (*Werk* v. *Parker*, 249 U. S. 190, 39 Sup. Ct. 197) where this Court stated as follows:

> "Nor is it questioned—indeed, we deem it clear, beyond question—that the court was justified in taking judicial notice of facts that appeared so abundantly from

standard works accessible in every considerable library. *Brown* v. *Piper,* 91 U. S. 37, 42, 23 L. Ed. 200; *Terhune* v. *Phillips,* 99 U. S. 592, 25 L. Ed. 293."

From the foregoing this Court will assume that longitudinals were wired to spirals for at least thirteen years prior to the date of the patent in suit. It is admitted that the structure of the patent in suit was new with the patent in concrete reinforcing. All the lower Courts admitted this. The decisions find the elements, but not the patented combination of elements.

The nearest approach seems to be the wired structure which has already been considered. This was in the prior art and was used. The other art is substantially a *paper art* and none of it shows anything that was used to any extent or could be so used. A few structures of this paper art had a slight use but no general recognition and were soon abandoned. The wired spiral longitudinal structures was in common use for at least 13 years before the patent. Why the immediate change upon the appearance of the patented structure? Why is it that the defendant had never used any of the structures of any of the paper patents upon which it relies? As we consider these paper patents, it will appear that the defendant did not use them because it could not use them.

Beginning with page 40 of the defendant's brief appears a reference to a number of drawings. These remarkable drawings seem to be partial structures taken from many arts to show many things under misleading titles. It is unnecessary to look at them if the purpose

is to show that the elements of the patent in suit are all old in other arts. This is admitted. Coils are old, bars are old, kerfs are old and so are overhanging spurs. *However, it must be admitted and cannot be denied that never before have these four elements been combined in any reinforce for concrete so that a coil was evenly spaced and rigidly held when the concrete was poured and tamped so that the user could be obsolutely certain that his reinforce was in place when the job was done and one part of his column is just as strong as another part and there is no unevenness in the reinforce.* This combination of cooperating elements which are positively included in the claims in suit cannot be met by showing drawings of the elements in various arts and various places. It cannot be made by showing subseqeunt patents for the same thing or different things.

These remarks seem to dispose of all defences based on drawings 1, 2 and 3.

Now turning to drawing No. 4 the British Hyatt patent of 1874, it is alleged that the helical coil is attached to the spacer by a rivet. This is an impossible structure.

The Kieserling German patent of 1892 forms the subject matter of drawing No. 5 and it is claimed that Figure 7c shows the structure of the Truscon Co. in the companion case No. 273. This is not true. In this Figure 7c the coil lies in a notch with nothing to hold it there and the structure is not practical or feasible for this reason. To be practical the coil must be rigidly and permanently held in place so that it cannot be forced out by tamping. A patent which lacks an essential element, to wit, the *overhang-*

ing spur cannot be an anticipation. This seems to be recognized by the defendant who alleges that other structures show the overhanging spurs. It is true that the other structures do show overhanging spurs, but what of it? We have already admitted that the elements are old, but no one was able to combine them into the structure of the patent in suit until this inventor did so.

Drawings 6, 7, 8, 9 and 10 merit slight attention. A fence post does not show the solution of the problem of *keeping the reinforce in proper alinement when the concrete is poured and temped, nor does a sand screen.* All these patents show elements, but none of them show the combination of the patent in suit and none of them show a device capable of functioning as does the patented device.

Drawing 11 shows the Considere patent. Considere shows a spiral and he shows longitudinals, but he shows *nothing for holding the spiral to a longitudinal* and spacing the same while the concrete is poured and tamped. This idea is entirely foreign to his thought. He was designing cables and towers. He had two elements of the patented combination, but got no further. He did not know how to hold the convolutions of the coils in right relation and firmly, although he was an exceedingly gifted and clever engineer. *It is contended that drawing No.* 11 *is exceedingly persuasive in favor of the plaintiff.* Here was a very gifted man, an able man, working in the prior art. He knew what was required and yet he did not know the solution of the problem incidental to meeting the requirements. At this late date, it looks as if

he should have known. This is because "knowledge after the event is always easy".

Drawing No. 12 is said to show the Cummings structure. Cummings used no spirals until on and after 1907. (Transcript of record page 28 Q27.) He knew how to hold *hoops in various ways,* but he knew nothing about *spirals.* Obviously, he did not know how to solve the problem of securing spirals in place prior to the patent in suit, or he would have done so. He was in the business and could have used the spirals had he known how.

We recognize that the Cummings structures of one kind and another were involved in the Pittsburgh case which is not before this Court. We are not arguing this Pittsburgh case at this time. We will not fall into the error of our opponents of assuming that the structure of this Pittsburgh case, which went to the Circuit Court of Appeals for the Third Circuit, is free and clear of the patent in suit. It may be or it may not be. The Circuit Court of Appeals for the Third Circuit has held that it is. This Court may take a different view. The statement in the brief is misleading as to the date. The date of the use of spirals is not 1905, but after 1907, that is after the filing date of the patent in suit and not before.

Drawing No. 13 shows subsequent art. We never heard of a patent being defeated by subsequent art. How does the Court know that McClure never saw the structure of Vandenburgh prior to the filing of his application? McClure was not called as a witness and so this Court cannot say whether or not he was independent of Vandenburgh, and the matter is

not before it. The same argument applies to Barnes who took out a patent for an altogether different thing. He may or may not have had knowledge of Vandenburgh's prior structure which was made in 1903 and in continuous existence thereafter until the date of its destruction. See the deposition of Vandenburgh and Blethyn beginning with page 18 of the transcript of record for Vandenburgh and page 32 for Blethyn. Under drawing No. 13 the defendant asked if it amounts to invention to do what Vandenburgh did and what the defendant did. Speaking as of the date of Vandenburgh's invention, we answer yes, most emphatically yes. If it were obvious to make the invention of Vandenburgh why was it not made earlier? Wired structures were used at least as early as 1893, some ten years before Vandenburgh and the art was crowded and the need great, and yet no one was able to satisfy the need. Once the invention was made and published to the world, it went into universal use and is still in universal use and it has put the old forms out of existence. These facts are very persuasive.

The defendant talks about an interference. How can there be an interference? There can be an interference when two parties claim the same thing at the same time in the Patent Office of the United States. Neither McClure nor any of the others claimed what Vandenburgh claimed, nor claimed anything like what Vandenburgh claimed. Barnes does not even show a spiral in the form of a hoop, but merely shows a bar which is bent zig zag back and forth. This is clearly irrelevant. McClure claims a narrow web or fin extending from an edge of a bar No such structure is in Vandenburgh.

Drawing No. 14 is supposed to show the Vandenburgh reissue and is not set forth as an anticipation.

None of the patents cited and relied upon by the defendant, in any way anticipate the invention of the patent in suit. These anticipations, insofar as they are relevant, show the poverty of the art and the inability of those skilled in the prior art to make the invention of the patent in suit. This paper art is much more persuasive in favor of the plaintiff than it is in favor of the defendant.

The sand screen patents and the fence post patents are certainly immaterial and irrelevant under *Potts* v. *Creager* 155 U. S. 597. The other patents, such as the Kieserling patent and the Considere patent and the Hyatt patent show spirals and they show bars, but no integral spurs are shown for holding the spirals to the bars by integral spurs and kerfs. This idea is entirely foreign to these patents and they are therefore entirely irrelevant under the decisions of this Court rendered in the cases of *Hobbs* v. *Beach* 180 U. S. 383 and *Toplif* v. *Toplif* 145 U. S. 156.

We consider the reinforcing patents from another point of view. Turning to these concrete reinforcing patents we may take the Kieserling German patent as the nearest and therefore the only patent which we need consider. This Kieserling patent is to the patent in suit what the prior art was to the Grant patent in suit in this Court in the case of *Diamond Rubber Co. of New York* v. *Consolidated Rubber Tire Co.*, 220 U. S. 428, The Grant patent, this Court will recollect, differed from the prior art in that a groove

was flared so that a tire could creep and thereby obtained a result not obtained in the prior art, to wit, longevity and in a new way, to wit, by creeping. In the case at bar the patent in suit secures a new result, to wit, the regular and fixed spacing of the coils when in use in concrete, thereby making a column of uniform strength throughout and it does so by clinching the coils in the notches by means of the overhanging spurs. This extreme rigidity and permanency has given to the structure of the patent in suit a use which is universal and now insisted upon by the building codes of various cities, as above pointed out. It is submitted that the same reasoning which sustained the validity of the grant patent must sustain the validity of the patent here in suit.

What this Court has said elsewhere, as to unsuccessful prior art applies here.

> "Likeness in them, in physical structure, to the apparatus of Richardson in important particulars, may be pointed out, but it is only as the anatomy of a corpse resembles that of a living being. The prior structures never effected the kind of result attained by Richardson's apparatus, because they lack the thing which gave success . . . . . Taught by Richardson and by the use of his apparatus, it is not difficult for skilled mechanics to take the prior structures and so arrange and use them as to produce more or less of the beneficial results first made known by Richardson; but, prior to 1866, though these old patents and their descriptions were accessible, no valve was made,

producing any such results." *Consolidated Safety Valve Co.* v. *Crosby Steam Gage & Valve Co.*, 113 U. S. 157, 5 Sup. Ct. 513, 521.

It is contended that under such circumstances this Court will assume that the structure, which was published by this patent, was beyond the skill of the calling and beyond the prior state of the art and involved invention and that the claims here in suit are valid and particularly claims 3 and 5 which are free of all adverse influences due to the reissue.

POINT III.

Damages should be allowed the plaintiff as to the 727 tons not covered in the accounting.

In the record in the Court of Appeals there were fifty pages of figures which were stipulated into the record and not in any way disputed on which the Master based his finding. It is thought by counsel for both sides that the Master summarized these figures sufficiently for the purpose of this Court and therefore by agreement, fifty pages were eliminated from the record as unnecessary, both sides agreeing to take the Master's summaries. There were a great many transactions, some of which were profitable and some of which were unprofitable. The transactions which were profitable aggregated 1,684 tons and the transactions which were not profitable aggregated 727 tons, the total tonnage sold being 2,411 tons.

The plaintiff never sold any spirals or manufactured them and it is not believed or contended in his behalf that he established a royalty. He therefore relies on a reasonable royalty which should be determined from all the facts and circumstances of the case, as set forth by this Court in the *Dowagiac case* 235 U. S. 641, 35 Sup. Ct. 221.

Now it appears from the testimony of the defendant's witness Webber, beginning with Q5 page 243 of the record, that the patented structure cost $4.88 a ton to assemble and that the new wired structure used by the defendant when put under injunction cost $5.62 a ton or 74c a ton more than the patented structure. Certainly this saving should be allowed as a reasonable royalty which is *at least 74c a ton*, and this should be allowed on the showing made by the defendant.

Furthermore, another of defendant's witnesses, one Lewellyn, stated in answer to question 9 page 257 of the record that the sale of spirals is frequently unprofitable in itself, but merely serves to assist in the sale of other concrete reinforcement. This indicates that the invention has value, whether a profit is made from its sale or not and is persuasive to the effect that a royalty should be paid.

In this connection, we call the attention of the Court to the fact that the defendant sold 1,684 tons of infringing spirals and made a profit of substantially $19,000 or a little more than $11 a ton, on an average.

Two witnesses, White and Thayer have been called by the plaintiff, and they have shown that the patented structure causes a great sav-

ing over the wiring structure of the prior art, White saying that $36 a ton for the particular column he considered (record pages 47 and 48) and Thayer, $10 a ton (record page 65 question 26). Both Thayer and White compared the patented bar and spiral which were the only commercial devices open to the defendant at the time of the infringement and upon considering the conditions, these experts estimated $12 and $8 a ton as reasonable royalties. Where the plaintiff made agreements, without regard to litigation, he agreed to accept $3.00 a ton. The defendant could well afford to pay $5 a ton to get and hold the business.

Taking all matters into consideration, the plaintiff submits that $5 a ton is a reasonable royalty and should be allowed by this Court. This will total $3,635 if this Court takes this view.

POINT IV.

Profits should be allowed as to the 1884 tons without reduction for alleged interest on the estimated investment and with interest as to each transaction from this date.

The Master found at page 215, fol. 645 of the record that the defendant's statements, as finally amended, were made up of many items as to some of which there was a profit and on others a loss and the profitable items aggregate $18,982.13. From this the Master deducted $3,063.80 interest on the investment, a matter

which will be explained below, leaving a net profit in favor of the plaintiff of $15,918.33. This recovery is based on 1,684 tons as to which there was a profit. This sum of $15,918.33 which the Master has allowed, as well as the two lower Courts, is certainly allowable beyond all reasonable dispute under the *Westinghouse* v. *Wagner* case 225 U. S. 604, paragraphs a and b, either or both. These paragraphs read as follows:

> "(a) Where the infringer has sold or used a patented article, the plaintiff is entitled to recover all of the profits."
>
> "(b) Where a patent, though using old elements, gives the entire value to the combination, the plaintiff is entitled to recover all of the profits. *Hurlbut* v. *Schillinger*, 130 U. S. 472, 32 L. ed. 1016, 9 Sup. Ct. Rep. 584."

The defendant argues at great length beginning with page 93 of its brief as to the accounting. The entire argument seems to be based upon a misconception of the facts of the case at bar. The patented structure, as we have pointed out above, has four elements, namely, a coil, a bar, a notch and an overhanging spur. The entire value of the combination is what has been appropriated by the defendant. Therefore, there is no occasion to segregate what belongs to the patent and what does not belong to the patent. The case comes squarely within the first paragraph of *Westinghouse* v. *Wagner*, known as paragraph "a" and it also comes within paragraph "b", as we have just pointed

out. It does not come within the other paragraphs wherein a peculiar value is due to improvements of the prior art or to improvements of the defendant which are open to it as of the date of infringement. No effort was therefore made in at any apportionment and none was necessary, the plaintiff being entitled to the entire profit and this he was allowed.

Take any of the elements of the defendant's structure or of the patented structure out of combination and there is nothing left. The combination is everything or it is nothing. If the combination be nothing, the case will fail on the ground of want of patentable novelty in the patent in suit, but if this patentable novelty be admitted, the decision will stand and the accounting is good, the figures being actually based on what was not in dispute and on what was submitted by the defendant's own expert accountant.

There is one matter which should be called to the attention of the Court. Beginning with the second paragraph of page 97 of the defendant's brief appears an argument based on the assumption that collapsibility is a matter of value and that this was not considered by the Master, etc.

It is thought that the defendant at this late hour cannot argue this point because the exception was not raised before the Master. It was urged for the first time in the Court of Appeals. This is too late.

> "It was urged in the argument in this Court that the defendants are jointly and severally liable, inasmuch as the Stearns

Company manufactured the machines and the Typewriter Inspection Company sold them. The objection thus raised in this Court was not suggested to the Master, and is not included among the exceptions taken to his report, although it is stated in the assignment of errors filed to the Court's decree that error was committed by the Court in failing to find that the defendants were jointly infringers and are jointly liable. Counsel must be aware that the proper practice requires that no exceptions to a Master's report can be raised in this court which were not taken before the Master. The rule is an old and well-established one. In *Story* v. *Livingston*, 13 Pet. 359, 366, 10 L., Ed. 200, the Supreme Court in 1839 declared that in chancery practice no exceptions to a Master's report could be made which were not taken before the Master, and that the object of the rule was to save time, and to give him an opportunity to correct his errors or re-consider his opinion. Such had long been the English rule, and the Federal Courts have always adhered to it. See *McMicken* v. *Perin* 18 How. 507, 15 L. Ed. 504 (1855); *Topliff* v. *Topliff*, 145 U. S. 156, 173, 12 Sup. Ct. 825, 36 L. Ed. 658 (1892)." *Underwood* v. *Stearns* 227 Fed. 74, 83 C. C. A. 2nd Circuit.

In the case at bar the defendant took the total sales value of all products made by it during the time covered by the infringements and the sales value of the infringing articles as well as the total average value of the capital

and surplus of the entire business covered by the time of infringement and by the aid of these three factors and the rule of three, determined the alleged average value of plant and equipment employed in infringing operations and set the same at $24,758.05 and then estimated interest at 6% for the entire priod of the infringement so as to get the sum of $4,085.07.

The Master reduced this sum because not all sales of infringing articles were involved in the profits recovered, there being, as above stated, 727 tons of spirals as to which there were no profits while profits were allowed on 1,684 tons. The Master estimated that by going by the selling price, substantially 75% of the sales were profitable and so he allowed 75% of this $4,085.07 and reached the sum $3,063.80 as to which he allowed the defendant a rebate as set forth at page 216 of the record.

Now assuming these figures to be correct, the plaintiff alleges that the principle is all wrong.

The defendant's method of calculating interest assumes that all parts of the plants and equipments had had equal value. This is a mere presumption. There is nothing of any kind whatsoever in the case to justify this presumption. No effort has been made to segregate the part of defendant's plant employed in making infringing articles. Nothing is in the record to show the difference in cost between the cost of producing spirals and the cost of producing other products. The method of calculating employed is a hodge-podge lumped together rule of three method, leaving all the facts, except the grand totals of the business and the business of spirals, to inference and conjecture.

What the Supreme Court has said on this subject surely applies here:

> "In the present case the defendant's plant and real estate were used for several other and wholly different kinds of manufacture than the patented article, and the evidence offered to distinguish between the profits derived from the use of the plant and real estate for making the borated cotton and those attributable to the other sources of profits was not sufficient to enable the master to make a satisfactory apportionment or allowance for interest on the investment.
>
> We do not wish to be understood as holding that in no case where the plaintiff's damages are measured by the defendant's profits ought there to be an allowance in the latter's favor of interest on the money invested in the plant. Nor do we say that such an allowance may not be properly made even where the use of the plant is not wholly restricted to making the infringing article. But the evidence, in such a case, should enable the Master to satisfactorily apportion the interest between the several kinds of business." *Seabury & Johnson* v. *Am Ende*, 152 U. S. 561, 14 Sup. Ct. 683, 686.

We submit that in view of this authority and the well established practice of this Court, no interest should be allowed the defendant in view of the showing here made.

On the other hand, the plaintiff insists that interest should be allowed to him because each item is admitted by the defendant as to date and is liquidated as to amount so that it is possible to calculate exactly what interest is due from facts which are not in dispute.

Where damages are not liquided and have to be determined by the Court, it is conceded that the correct practice is not to allow interest. Such is not the case at bar. Damages are different from profits. Profits are entirely within the control of the defendant and entirely within its knowledge and when a defendant admits the amounts and dates of such profits, there is nothing more to be said provided the plaintiff agrees thereto, as is the case here. Interest should be allowed because there is in the record all the data necessary for its calculation.

Counsel for the plaintiff are unable to find any case in this Court exactly in point and therefore presents this point for judicial determination, with the contention that such interest should be allowed for the reasons given.

Conclusion.

In behalf of the plaintiff, it is submitted that the reissue in this case was proper and that all claims in suit are valid, both in view of the reissue and in view of the prior art, and it is also contended that damages in the sum of $3635 should be allowed in addition

to the profits which were admitted by the defendant were properly allowable and allowable without abatement and with interest, and it is requested that this case be remanded to the lower Court with instructions to disallow the interest allowed to the defendant in the sum of $3,063.80 and to allow interest to the plaintiff at 6% from the date of each sale, or some $22,700 plus interest.

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